

**DETECTION SYSTEM FOR DISK-BASED LABORATORY AND  
IMPROVED OPTICAL BIO-DISC INCLUDING SAME**

**ABSTRACT OF THE DISCLOSURE**

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A detection system for use in optical disk-based devices for measuring the  
5 presence of an analyte in a sample. The detection system includes an analyte  
detector unit containing a primary detector which selectively reacts with analyte  
present in a sample to produce an amplification agent. The detection system  
further includes an amplification unit comprising a plurality of secondary  
10 detection agents which are each changeable between a negative and positive  
detection state. A fluid connection is provided between the analyte detector unit  
and amplification unit to provide reactive contact between the amplification agent  
and the plurality of detection agents. The amplification agent is capable of  
changing a plurality of detection agents between the negative and positive  
detection states to thereby amplify the measurable presence of the analyte.